

5 Dostoevsky, Sechenov, and the Reflexes of the Brain: Towards a Stylistic Genealogy of *Notes from Underground*

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It is customary to consider *Notes from Underground* [Zapiski iz podpol'ia, 1864] as the first text that anticipates Dostoevsky's subsequent great novels in combining psychological, ideological, and philosophical features with narrative experimentation. While the genesis and content of the philosophical ideas espoused by the Underground Man have been studied extensively,¹ almost no research has been done on the connection of the novella with contemporaneous psychology and physiology. One may wonder whether there is a good reason to study these matters. What could this approach tell us about the poetics of Dostoevsky and the evolution of the novelistic form in nineteenth-century Russia? In this chapter I will juxtapose *Notes from Underground* with the most prominent Russian text on physiology produced at the beginning of the 1860s, Ivan Sechenov's *Reflexes of the Brain* [Refleksy golovnogo mozga, 1863], to explain how Dostoevsky succeeded in creating not only an influential philosophical text, but also an experimental narrative that expands the capacities of psychological prose.

In short, the answer lies in Dostoevsky's understanding of Sechenov's article as an intellectual challenge, and, at the same time, as a *discursive model* for a literary response, namely, *Notes from Underground*, a novella written in January–May of 1864. It is peculiar insofar as Dostoevsky both polemicalizes with Sechenov's theory, which postulates that free will and voluntary human action are entirely predetermined, and uses Sechenov's rhetorical and narrative models in his fiction to demonstrate why this theory is false and how it can be improved.

In implanting physiological discourse into his fictional world, Dostoevsky might have been motivated by polemical considerations; and yet, in doing so, he expanded the capacity of prose narratives for depicting long chains of psychological reactions structured in a way akin to the reflex arc. Juxtaposing Sechenov's scientific narrative and Dostoevsky's

prose reveals the genesis and specific features of the narrative techniques used by the novelist to depict the mental and psychical lives of his characters.² On the one hand, Dostoevsky inherits the techniques characteristic of the psychological confessional prose of the 1850s such as Ivan Turgenev's "The Diary of the Superfluous Man" [*Dnevnik lishnego cheloveka*, 1850],³ and absorbs the method, familiar to the writers of that generation, whereby the character's subjectivity is conveyed through the social and psychological determination of the character's acts. On the other hand, scholars are justified not only in positing a gap between Dostoevsky's psychological prose style of the 1860s and that of the psychological prose of the 1850s, but also in proposing a qualitative difference between the two periods of Dostoevsky's writing career. The present chapter argues that this difference can be described as a transition in respect to the representation of physical processes, from what can be branded as the "Romantic" type of representation to the rationalized and positivist one, the latter guided by the discourse, metaphors, and cognitive frameworks offered by mid-nineteenth-century physiological and biological sciences.

Such an approach to the study of the interaction between scientific and artistic discourse during the age of positivism, natural sciences, and realism has long been practised by English literature scholars. Gillian Beer's classic study *Darwin's Plots* (1983) explained that the language, metaphors, and evolutionary thinking peculiar to the author of *On the Origin of Species* (1859) changed not only the way people conceived the world around them, but also the manner of plot construction in Victorian novels. For example, in a chapter on *Middlemarch* (1872), Beer demonstrates how Darwin's evolutionary concept of an "inextricable web of affinity" influenced George Eliot's plot, which depicts the dwellers of a small town with closely interconnected lives. Characters are related to each other not only generically, economically, and socially, but also by virtue of a remarkably complex system of psychological correspondences, attributes, and repetitions of identical situations with ubiquitous variability.⁴

Among recent studies I must also mention the scholarship of Nicholas Dames. Of particular importance for my discussion of Sechenov and Dostoevsky is his article "The Network of Nerves" (2011). Here Dames demonstrates that the physiological psychology (Lewes, Dallas, Bain) that dominated British science in the middle of the nineteenth century developed its own physiological theory of the psychological self that prioritized non-conscious and involuntary bodily impulses rather than the subconscious, as in the works of Sigmund Freud. Dames claims that "much of the tone and leisurely length of Victorian narrative is owed to

this new epistemological split between a knowing narrator and characters who are constitutively, perhaps even ontologically, unaware of the basis of their motives. Free indirect style, which had been such a valuable tool for Austen and which would flourish in writers like Flaubert and Joyce, and as a result became foregrounded in theories of the novel influenced by modernist practice, is a much less marked presence within mid-Victorian fiction.”⁵

Dames’s discovery, which sheds new light on the history of the Victorian novel and the reading practices it engendered in the nineteenth century, opens new possibilities for the study of the Russian novel as well. So far, little has been done in this area, even though the importance of nineteenth-century scientific physiological theories for literary genres and discourses has been acknowledged by scholars, in some cases, extensively. One may consider, for example, Michael Holquist’s remarkable description of the influence exerted by Sechenov’s book upon the discursive space of the 1860s. Analyzing *Fathers and Children* [Ottsy i deti, 1862], Holquist argued that Turgenev tested a new type of discourse, scientism, “the language of facts,” which Sechenov had championed since 1860 in his lectures at the Medical and Surgical Academy. Turgenev’s novel, however, anticipated the arrival of Sechenov’s book, and gave life to an influential discourse that shaped the reception of *Reflexes of the Brain* in the 1860s as a Nihilist book and precipitated a ban on it.⁶ Yet, since Holquist’s groundbreaking study, there has been little progress in the research on the mutual influence of scientific discourse, narration, and the plot structure of the Russian novel. The sole exception is Valeria Sobol’s *Febris Erotica* (2011), which analyzes *Reflexes of the Brain*, but only as part of the public polemics of the 1860s that updated the language used to articulate conceptions of human nature.⁷ The present chapter probes the major connections of this system, its basal ganglia, so to speak, by using *Notes from Underground* as a case study. It also sets priorities for future studies of the emergence of Dostoevsky’s signature style.

Dostoevsky and Sechenov

In 1966, in his doctoral thesis, R.G. Nazirov observed that Dostoevsky was familiar with Sechenov’s article and responded to it polemically in the first chapter of *Notes from Underground*. Nazirov argues that the Russian writer used the expression “dispassionate wish” [besstrastnoe khotenie], which he borrowed from the physiologist.⁸ However, Nazirov offered no further development of his insight, nor was it discussed by any other Dostoevsky scholars, despite the fact that the 1990s and 2000s were marked by the publication of the noted monographs by Harriet Murav (1992)

and James Scanlan (2002) that explored the way Dostoevsky reacted to the scientific discourses and theories of his time.⁹ Murav does mention Sechenov's book, a special 1866 edition of which was present in Dostoevsky's personal library, but only in the context of a general overview of "rational egoism" and the positivist theories of the 1860s.¹⁰ Only G. Kichigina, in her recent book (2009) on the history of experimental physiology in the Russian empire, mentions briefly that Dostoevsky's *Notes from Underground* challenges the physiological discoveries that reject the freedom of the human will.¹¹

The history of Dostoevsky's reception of Sechenov's study is an example of a situation where the answer to the question "did the author read the text by another author" serves merely as a starting point for further inquiry, helping one focus on the problems of poetics and the narrative structure of the text. Thanks to the note in Dostoevsky's notebook, which reads "Memory of feeling (Sechenov's article)" [Pamiat' chuvstva (stat'ia Sechenova)] (20:170), we know that he read the article, published in the October 1863 issue of the *Medical Bulletin*, in November–December of that year, roughly a month before writing the first chapter of *Notes from Underground* in January–February of 1864 (5:375).¹² Dostoevsky's notebooks of the early 1860s did not preserve his views on Sechenov's personality or research. Only later, in 1877, in a letter to A.F. Gerasimova, did Dostoevsky provide his assessment of this famous scientist:

It is not the same in Europe; there you can meet Humboldt and Bernard and other such people with universal ideas, with tremendous education and knowledge not only in their own specialty. In our country, however, even very gifted people, for instance, Sechenov, are basically ignorant and uneducated outside of their own subject. Sechenov knows nothing about his opponents (the philosophers), and thus he does more harm than good with his scientific conclusions. As for the majority of students, whether male or female, they are an ignorant lot. What is the benefit in this for mankind?¹³

Dostoevsky's reproach of Sechenov and his colleagues for their lack of erudition is overgeneralized and prejudiced. Sechenov's intellectual biography, reconstructed in the twentieth century, demonstrates that, in addition to conducting research in the laboratories of Paris, Vienna, and Berlin, in collaboration with Claude Bernard, Carl Ludwig, and other luminaries of nineteenth-century European physiology, he also read extensively in the literature of philosophy, psychology, and the natural sciences. For example, in letters to his future wife M. Bokova, sent from Europe in 1867–68, Sechenov mentions reading works by Fichte, Kant, Schelling, Hegel, Herbart, and Helmholtz.¹⁴

Nevertheless, as early as 1863, Dostoevsky perceived Sechenov and his article as an ideological adversary whose theory he could not endorse. Throughout his entire subsequent writing career, Dostoevsky used Sechenov's name and the expression "reflexes of the brain" as a symbol of a false world view and *Notes from Underground* became the first text to reflect this attitude. By juxtaposing the novella with Sechenov's article, we arrive at several conclusions. First of all, one can't help but notice that Dostoevsky evidently polemicized with the famous physiologist on an ideological and discursive level, engaging in a debate regarding free will. This polemic presupposes that the text of *Notes* is saturated with marked words and expressions that allude to the physiological discourse generally associated with the works of Sechenov and other positivists. Second, as I intend to show here, the complex reflex arc discovered by the physiologist, the model of mental processes built on the basis of this physiological phenomenon, and, finally, their description in *Reflexes of the Brain* influenced the narrative technique of *Notes from Underground* and shaped the methods which Dostoevsky used to depict the character's mental life.

The Underground Man's Theory as a Polemic with Sechenov

The Underground Man's ideology and his attack on the theories of rational egoism have been covered exhaustively in Scanlan's monograph, which demonstrates convincingly that the character challenges both variations of rational egoism: psychological and normative.¹⁵ Arguing against hypothetical ideological opponents – positivists, evolutionists, socialists – the Underground Man plays his trump card by positing the person's "free wish" [svobodnoe khotenie] as that which makes them a free individual. Nazirov accurately noted that "the confession of the Underground Man, offered in the novella's first chapter, is a paradox of free will and determination."¹⁶ Following Nazirov, I will argue here that the word "wish" [khotenie] itself, aside from its obvious connection to the well-known Russian proverb "na khotenie est' terpenie," [there is patience in wishes, or "all good things come to those who wait"] could be borrowed by Dostoevsky from the final section of Sechenov's article, where it is abstracted into a concept and presented as a token of self-deception, a characteristic of modern individuals who view themselves as bearers of free will and masters of their own "wishes" [khoteniia] and "desires" [zhelaniia].¹⁷

As demonstrated by historians of physiology, in *Reflexes of the Brain* Sechenov sought to discredit the philosophical foundation of the concept of free will, offering to replace it with a purely scientific, physiological

foundation derived from empirical experiments.¹⁸ At the same time, the famous scientist not only eliminated thought and consciousness from the process of sensation-formation (excitation and inhibition), but also built them into a complex chain of reflexes.¹⁹

Unlike desire, which is often seen as capricious, wishing, in Sechenov's interpretation, "is often regarded as an act of will," "Being tired, I am sitting; I should like to lie down, but I remain seated."²⁰ Sechenov analyses cases where a person, when wishing dispassionately, can even act "against his desire," for example: "I am tired and am sitting, I should like to stretch out, but I get up and begin to work." According to Sechenov, wishing is a brain reflex that is nearly devoid of passion. Desire, also a reflex, is, by contrast, accompanied by a clear manifestation of passion. Sechenov concludes that the concepts that exist in ordinary language fail to precisely characterize a more complex phenomenon and develops a new descriptive language: "The reader will see therefore that there is a certain confusion either in the usage of words which express sensations or in the sensations themselves and in the concepts and words associated with them."²¹ Enthusiastic about popularizing his ideas, and, at the same time, keen on developing new terminology, Sechenov often operated with concepts borrowed from everyday life, such as "wish" [khotenie], "passion" [strastnost'], and "love" [liubov']. As Sechenov's famous student, Ivan Pavlov, noted perceptively, Sechenov used everyday language when he wrote *Reflexes of the Brain* for *The Contemporary* [Sovremennik] because he was passionately in love with his future wife, Mariya Bokova.²² Following Pavlov's line of thought, one could add that *Reflexes* speaks so much about human life and passion precisely for that reason, as Sechenov, while writing the article, was not only pondering reflexes, but also reflecting on his feelings towards Bokova.

Sechenov's article reaches its high point in a thought experiment centred on the most routine situation of everyday life, in which the author's hypothetical interlocutor voluntarily bends his finger. This procedure, Sechenov continues wryly, is considered to be an apotheosis of free will, the triumph of the personal wish, which is supposedly independent of external circumstances. Sechenov, however, rejects this conception. First, the interlocutor bends his finger in a machine-like fashion; second, their exchange takes place not in an abstract space, but under the circumstance where the interlocutor has already bent his finger involuntarily a thousand times before, albeit without noticing. Finally, the finger is a human "organ" that is often bent involuntarily. Thus, as Sechenov's thought experiment is meant to demonstrate, even such vivid manifestations of "wishing" as bending one's finger are determined by long chains of involuntary reflexes.

Famously, the first chapter of Dostoevsky's novella offers the Underground Man's step-by-step refutation of the thesis that one's psychological life is totally predetermined by one's physiology. There is no doubt that the Underground Man aims some of his pronouncements directly and personally at Sechenov and his theory.²³ Below is the first passage where the protagonist alludes to a position that rejects free will and offers the laws of nature as an alternative explanation:

That's not all: then you say, science itself will teach man ... that in fact he doesn't have – and never has had – *any will or caprice of his own*, and that he himself is nothing more than something *like a piano key* or an organ stop; and that, above that, the world also includes the laws of nature, so that everything he does is done *not because he desires it* [vovse ne po ego kho-ten'iu], *but of itself, according to the laws of nature.* (5:112)²⁴

Then, as the exchange between the Underground Man and his hypothetical opponent becomes even more heated, the conversation hints directly at the theory of reflexes:

"Ha, ha, ha! But desire, in essence, if you will, doesn't even exist!" you interrupt me, laughing loudly. "Science has succeeded in anatomizing man to such an extent that we now know that desire and so-called free will are nothing more than ..."

"Wait, gentlemen, that's exactly how I wanted to begin. I admit, I was even frightened. I was just about to shout who in hell knows what desire depends on, and that maybe thank God for that, but then I remembered science and ... stopped dead in my tracks. And then you started talking. Well, actually, if some day they do in fact find *some formula for all our desires and caprices – that is, a formula describing what they depend on, the precise laws that determine how they arise, how they multiply, what they're directed at in such and such a case, etc., etc. – that is to say, a real mathematical formula* – then maybe man will immediately stop desiring; what's more, maybe he'll definitely stop. Really, who would want to desire with reference to a mathematical table? As if that's not enough, he'll immediately be transformed from a man into an organ stop or something of the sort, because what is man without desires and without will if not an organ stop? (5:106; 31; italics mine.)

It seems to me that the first remark was to culminate in the scandalous word "reflexes," meant to appear after the ellipsis, but, since the Underground Man was interrupted by his "inner" interlocutor, it was left to the reader to decipher the hint. The clue that points to our interpretation comes from the verb *razanatomirovat'*. In Russian the verb's prefix and

root render it something like “to anatomize,” which alludes to physiology and the dissection of frogs, i.e., to images that, in the mid-1860s, were associated inextricably with Sechenov and his activities.²⁵

These passages exemplify the way Dostoevsky thematizes the concept of “desiring,” along with adjacent terms such as “caprice” [kapriz], as a parody of Sechenov’s scientific language. Wishing becomes a leitmotif of the Underground Man’s behaviour, and, in the second chapter of *Notes*, the main character and his adversaries often manifest their will through the verbs “to wish” [khotet’] and “to be able to” [moch’], and the concepts of “power” [vlast’], tyranny, dominance, slavery, and submission. This lexicon simply offers a discursive embodiment of the problem of free will, as this problem is realized through situational plot elements based, as shown by Tsvetan Todorov, on the Hegelian master–slave dialectic.²⁶

Contemporary scholars of Dostoevsky have expanded the philosophical context of the problem of free will in *Notes from Underground* beyond Hegel, incorporating Fichte, Kierkegaard, Schopenhauer, and Henry Thomas Buckle into it as well.²⁷ While it is quite likely that the novelist read the former two before 1864, his familiarity with Schopenhauer’s philosophy was evidently general at best, as he drew upon synopses provided in articles by Dmitry Pisarev, Nikolai Strakhov, and Varfolomei Zaitsev.²⁸ From this point of view it becomes clear that Sechenov’s pointed discreditation of the very notion of free will had exhausted Dostoevsky’s patience, triggering a response based on the body of reflection that formed over the years of Dostoevsky’s intensive journalistic work at *Vremia*, when he immersed himself enthusiastically in the world of “thick” journals, reading and reviewing them.

Accepting Sechenov’s provocative challenge, Dostoevsky “teaches” his character Sechenovian language and confers on him a remarkable talent for reaching into the depths of his sensations and feelings, dissecting them into the most minuscule components, and documenting them in writing. The Underground Man famously explains his inability to end the train of self-analysis by claiming that he fails to find the first cause, and, in this, recalls the logic and rhetoric of Sechenov’s scientific reflections in *Reflexes of the Brain*, which proceed from the superficial and visible causes of human behaviour to “the first causes of any behaviour.” The backbone of Sechenov’s investigation is the scientific epistemology of discovering things buried deeply beneath the surface and establishing their true causal connections, so, unsurprisingly, the word “cause” [prichina] occurs there 165 times.²⁹

Thus, Dostoevsky expands the Underground Man’s discursive vocabulary by borrowing from the stock of terms and concepts Sechenov uses

to record deep psychological processes. Among these terms are the “first cause” [pervaia prichina] and “hyperreflexia” [usilennyi refleks], the latter possibly converted by Dostoevsky into the concept of hyperconsciousness [usilennoe soznanie].³⁰ Of great interest is the expression “the memory of feeling,” noted by Dostoevsky in his notebook, which refers to the model of human memory and its activity developed by Sechenov. According to the latter, human beings possess four types of memory: visual and tactile (spatial) and aural and muscular (temporal).³¹ Sechenov explains that mental reproduction of sensations through memory can occur when the subject is influenced by objects or images positioned before their eyes.³² The article proceeds by providing vivid examples meant to demonstrate the reflex nature of some of the associations that occur to people. For example, thoughts about the emperor of China, which Sechenov entertained consciously at night, occur to him again when he stretches out on his bed during the day.³³ It seems possible that Dostoevsky was impressed by these explanations, and, for that reason, wrote them down in his notebook.

One may think that the importance of these and other occurrences of scientific terms in *Notes from Underground*, a work of fiction, lies only in the way they shed light on the character’s ideologically motivated attacks on much-despised positivist theories. Yet, similarly to the reflexes of Darwin’s style of thinking in the British novel, *Notes from Underground* offers us a phenomenon of significantly greater complexity.

In dissecting sensations down to their most minuscule aspects, just as a physiologist dissects a frog, in differentiating between “wish,” “caprice,” and “desire,” in modelling situations of ordinary life, Sechenov invented and publicized a sophisticated Russian anatomical language that did not exist before. Like the language of any groundbreaking scientific theory, it had great potential, since it could describe new phenomena of physical reality, not only those previously hidden under the cover of human flesh, but also those inaccessible to human consciousness and cognition. As I will demonstrate below, Dostoevsky accepted Sechenov’s challenge and put his invention to good use.

New Style Emerging

Sechenov’s possible influence on Dostoevsky is manifested most intriguingly at the narrative level that represents the emotions, motives, and affect of the Underground Man. When it comes to genre and speech, Dostoevsky follows Sechenov in constructing the character’s confession as a dialogue with imaginary opponents that always doubt the truthfulness of his claims. Since *Reflexes of the Brain* was addressed to a wide audience,

Sechenov had to mould his scholarly article into a lively dialogue with readers, set, as it were, in an anatomical theatre or at a public lecture, such as those delivered by this famous scientist at St Petersburg's Medical and Surgical Academy. This observation allows us to supplement Mikhail Bakhtin's conception of the dialogical nature of form in Dostoevsky's works, in general and, particularly, in *Notes from Underground*. It must be acknowledged that in adopting this form Dostoevsky's influence was not works of philosophy such as those by Diderot.³⁴ Instead he drew upon works of popular science written by contemporaneous authors, as they frequently constructed their narratives as dialogues between a pontiff of science and his incredulous listeners.

Aside from this fairly superficial resemblance, it is possible that Dostoevsky, in structuring his character's self-description, employed the tripartite scheme used in Sechenov's description of a voluntary reflex:

- 1 emotional excitation
- 2 particular psychological act
- 3 muscular movement³⁵

Careful analysis of the second part of the novella, in which its protagonist describes his reactions to events in his internal and external life, reveals a remarkable regularity. It turns out that some of these fragments are arrayed according to a single narrative template that resembles Sechenov's tripartite schema. Thus, the character begins by narrating how an external impulse is delivered into his consciousness; then, he describes how his consciousness analyses it laboriously; after that, the character usually presents himself as committing an act ("muscular motion"), but, most importantly, this act oftentimes does not happen in accordance with the initial impulse. Here is the way such narrative segments are structured. Let us consider a scene from the second part of the novella, Zverkov's dinner party.

(I) (1) "Now's the time to throw a bottle at their heads," (2) I thought to myself as I picked up the bottle ... (3) and filled my glass.

"... No, I'd better sit it out to the very end!" I kept thinking. "You'd be delighted, gentlemen, if I left. But nothing doing! I'll purposely go on sitting here and drinking to the very end, as a sign that I don't think you of the slightest consequence. I'll go on sitting and drinking, because this is a tavern and I paid good money to get in. (II) (1) I'll go on sitting and drinking, because I consider you to be so many pawns, so many non-existent pawns. I'll go on sitting and drinking ... (2) and singing if I want to, yes, sir, singing, because I have the right ... to ... to sing ... hmm!"

(3) But I didn't sing. I just tried not to look at any of them: I assumed the most carefree poses and waited impatiently for them to speak to me *first*. But alas, they didn't speak to me! (5:146; 77–8).

Roman numerals I and II are used here to mark the two segments of the narrative that convey the train of thoughts and impulses flashing through the character's mind, and the physical act or its absence that follows them. Within each segment, Arabic numerals between 1 and 3 are used to mark the three stages of the character's actions, (1) his emotional excitation (usually an occurrent thought or an external impulse); (2) a secondary thought or motion that adjusts the initial impulse; and (3) the final muscular motion or its absence that manifests itself as a complete opposite of the initial impulse.

This passage demonstrates that the character always lives in a state of extreme excitation, which propels his thought to operate with increased intensity, and that, in turn, stimulates his imagination. But none of the character's initial desires (to throw a bottle at the detested companions or to sing) is realized, because something, which is not verbalized in the text of the novella, is always blocking the character's impulses, forcing him to act contrary to his initial motives.

Let us consider another scene from the second part of the novella.

No one paid any attention to me, and (1) I sat crushed and humiliated.

"Lord in heaven, why am I associating with these people?" I thought. "And what a fool I've made of myself in front of them! I let Ferfichkin go too far, though. The numbskulls think they're doing me an honor by letting me sit down at their table; they don't understand that it's just the opposite: I'm doing them an honor! 'I've grown thinner! My clothes!' My damn trousers! Zverkov immediately noticed the yellow stain on my knee ... But what's the use! (2) I should get up right away, this very minute, take my hat, and just leave, without saying a word ... Out of contempt! And tomorrow, a duel. The scoundrels! As though I cared about the seven roubles. They may think ... To hell with it! I don't care about the seven roubles. I'm leaving this very minute!

(3) It goes without saying that I stayed.

In my misery I drank Lafite and sherry by the glassful. (5:144–5; 75)

This example presents a similar sequence of the character's emotions and affective motions, where the state of suppression and humiliation triggers a strong reflection that results in a passionate desire to leave the restaurant abruptly. Nevertheless, the character ends up doing quite the opposite; not only does he remain at the table, but, moreover, he begins drinking more.

It is easy to notice that the three stages in Dostoevsky's novella are not entirely consistent with Sechenov's model. The moment that marks the transition from the second to the third stage is the point of contention in Dostoevsky's polemic with Sechenov, as the Underground Man constantly acts against self-interest, against the familiar norms of rationality, and against his initial desires and even physiological reflexes. As the quotes demonstrate, the third, muscular, phase is usually set apart from the other two graphically, by an ellipsis, which symbolizes the discrepancy between Sechenov's theory, which rejects the freedom of the will, and the Underground Man's real behaviour, which, as one may think, manifests his own will and "desire." From this point of view, the entire second part of "Apropos of the Wet Snow" can be read as a literary refutation of Sechenov's theory, since each subsequent act, committed by the Underground Man, must be demonstrably illogical, absurd, and harmful, and must express the triumph of the character's "desiring" and his subconscious over the impulses of his reflexes.

Such an interpretation of Dostoevsky's polemic with Sechenov would seem to go against Robert Louis Jackson's well-known and convincing interpretation of the novel. Jackson argues that the will of the Underground Man manifests only in words, whereas in his actions and in communication with other people the hero becomes a victim of his own complexes and phantasms: "The irony of the bumping duel episode (like the irony of Raskolnikov's experiment) is clear: there are no manifestations of freedom of will here. Far from being a master of his fate, the Underground Man in his very efforts to declare his independence from the laws of nature demonstrates his enslavement to them."³⁶ And, elsewhere, "As we see him in part two in his own representation of his life – a drama he understands very well – nothing remains episodic. Every attempt to introduce the irrational into his life and to bring an illusion of authentic freedom, choice, self-determination, every attempt to play with the plot of his life only further underscores his subjection to the power of blind destiny."³⁷ As I noted earlier while commenting on the passages, it seems that an unknown force blocks the character's impulses and forces him to commit acts that contradict his advantage and, at the same time, undermine his own theory of free wishing as the chief criterion of his humanity and individuality, or, in other words, of his own self.

In fact, there is no contradiction between Dostoevsky's polemic with Sechenov and Jackson's assertion. The paradoxical situation, when the hero constantly manifests his wishes and at the same time slavishly depends on his whims and complexes, can be explained by the combination of two perspectives, the complex dialectic of domination and slavery. On

one hand, at the discursive level the Underground Man demonstrates the triumph of free desire, because, thanks to his eloquence and reflexivity, he exercises rhetorical power on those around him (Apollon, Liza, his former friends). On the other hand, at the level of the plot (*siuzhet*), its context, and its author's position, the hero is perceived by the other characters and readers as a slave of his caprices and inordinate pride, that is, his own *self*. It is his self, ultimately, that both appears as the force that blocks the hero's natural, reflexive impulses and forces him to perform actions which go against his own interests.

The position of Dostoevsky the thinker, as is well known, does not correspond to the ideology put forward by the Underground Man. It also differs from Sechenov's scientific doctrine. True freedom of will and control over reflexes, according to Dostoevsky, are only possible within the framework of Christian self-abnegation and love. Wishing can, and, indeed, must be governed not by reflexes, but by the Christian faith and its compassion and humility. Hence, unsurprisingly, the scene of Liza's final visit, her embrace, and the character's weeping offer is the only part of the story marked by the collapse of the usual model of his unpredictable and unreasonable reactions, as, for the first time in the course of his confession, he meets another person's natural, Christian act with a reaction that is logical and natural.³⁸ The narrator, as if echoing Sechenov's rhetorics, concludes the second part of the novella by addressing those readers who would say that "all this is inconceivable."

Paradoxically, and in a twist of historical irony that coloured Dostoevsky's polemic with Sechenov, just as the apologia for faith in Christ from *Notes from Underground* suffered on account of censorship, so did the apologia for love in *Reflexes of the Brain*. The article's last paragraph, which described the love of one's neighbour as a necessary attitude that must underlie the foundations of morality, had to be removed in compliance with the censor's demands:

The teaching which I have expounded does not destroy the value of human virtue and morals: the foundations of our love for one another are eternal; in the same way, man will always value a good machine better and will prefer it to a bad one when he has the choice. But in addition to this negative merit of my teaching let me point to a positive one: only my point of view explains how man can acquire the greatest of all human virtues – all-forgiving love, that is, complete indulgence toward one's neighbor.³⁹

Although Dostoevsky could not know about this hymn to love and empathy, it is characteristic that, although overall he disagrees with the revolutionary discoveries Sechenov makes in reflexology, he plays with the

same scientific argument in the fictional world of *Notes from Underground* in order to prove the same idea: all-forgiving love.

One may object, perhaps justifiably, to my model of the development of Dostoevsky's new method of representing affect by hypothesizing that the writer had already tested a narrative technique of this sort in his early psychological novellas. This hypothesis, however, is not fully substantiated. Indeed, *The Double* [Dvoynik, 1846], Dostoevsky's early psychological masterpiece, occasionally features passages that, describing Golyadkin Senior, accentuate rapid changes in his intentions and behaviour. All of these (numbering four or five in total) are found in chapters 1 to 4 of both the 1846 and the 1866 editions. Thus, for example, the first chapter narrates how Golyadkin, while standing in front of Dr Rutenshpitz's door, reached out for the doorbell and, suddenly,

reasoned that tomorrow would be better, and that now, for the time being, there was no great need. But, suddenly hearing someone's footsteps on the stairs, Mr. Goliadkin immediately changed his new resolve and, just by the way, though maintaining a most resolute air, rang at Krestyan Ivanovich's door. (1:114)⁴⁰

While in this case the character's abrupt change of motivation could be attributed to his indecisive and suspicious nature, the following two passages reveal a discrepancy between what the character says and what his body does,

"... Why don't I go home? Devil take it all! I'm going, and that's that!" Having thus resolved his situation, Mr. Goliadkin quickly moved forward, as if someone had touched a spring inside him; in two steps he was in the pantry, he threw off his overcoat, removed his hat, hastily shoved it all into a corner, straightened and smoothed himself out; then ... then he moved to the morning room, from there he flitted to yet another room, slipping almost unnoticed among the passionately engrossed gamblers; then ... then ... here Mr. Goliadkin forgot everything that was going on around him and directly, like a bolt from the blue, appeared in the ballroom. (1:132; 36)

Mr. Goliadkin, however, seemed to hear nothing, to see nothing, he could not look ... not for anything would he look; he lowered his eyes to the ground and just stood like that, having given himself in passing, however, his word of honor to shoot himself somehow that same night. Having given himself this word of honor, Mr. Goliadkin said to himself mentally: "*Here goes!*" and, to his own greatest amazement, quite unexpectedly began suddenly to speak. (1:133; 37)

It is notable that the second and the third passage emphasize the somatic affects that the characters cannot control; the second, by a mechanistic comparison with a spring, and the third, by an expression that stresses the character's astonishment at the fact that an utterance came out of his own mouth. While describing the gap and discrepancy between Golyadkin's cognitive and affective spheres, Dostoevsky is keen on presenting his mind and personality as bifurcated, creating an effect that, at first glance, may appear identical to the phenomenon of underground consciousness in *Notes from Underground*.⁴¹ Yet, the stylistic and narrative embodiment of bifurcation in *The Double* differs qualitatively from that of the 1864 novella. In *The Double*, aside from the four or five cases described above, it is represented through the fantastical redoubling of the protagonist, namely, through the emergence of his alter ego, which embodies his ambitions.⁴² In *Notes from Underground*, Dostoevsky, by rejecting the fantastical and turning towards a new approach to narrative construction, is prompted to develop a type of psychological representation that is best described as *zooming in*, where psychological reactions are split into several phases, each of them depicted in detail, to be followed by the character's multi-stage reflection, with the number of stages much greater than that in *The Double*.

Keeping in mind the way Sechenov's scientific discourse had possibly affected Dostoevsky's imagination, we can reconsider the traditional view of the genealogy of his "fantastical realism" in respect to its stylistic aspect. A keen follower of the latest developments in the natural sciences throughout his life, Dostoevsky not only polemicized with empiricism and evolutionism,⁴³ but also deployed some scientific metaphors, concepts, and narrative models to represent the mental and cognitive life of his characters with greater sophistication.

NOTES

The chapter is a revised and extended version of my Russian text: A. Vdovin, "Dostoevskii i refleksy golovnogo mozga: "Zapiski iz podpol'ia" v svete otkrytii I. M. Sechenova," in *Russkii realizm XIX veka: obschestvo, znanie, povestvovanie*, edited by M. Vaisman, A. Vdovin, I. Kliger, and K. Ospovat (Moscow: Novoe Literaturnoe Obozrenie, 2020), 431–51. This research is an output of a research project implemented as part of the Basic Research Program at the National Research University Higher School of Economics in 2021 (HSE). The translation of this chapter was supported by a Bridge Grant from the University of Toronto Faculty of Arts and Science and the Department of Slavic Languages and Literatures. The author and volume editors are grateful to Andriy Bilenkyy.

- 1 See comments in F.M. Dostoevskii, *Polnoe sobranie sochinenii v 30 tomakh*, ed. G.M. Fridlender et al. (Leningrad: "Nauka," 1972–90), vol. 5, 374–86. Subsequent references to this edition will be indicated in the text with volume and page numbers. In the newest *Polnoe sobranie sochinenii i pisem v 35 tomakh*, the commentary section is updated substantially on account of studies conducted between the 1980s and the 2010s. See F.M. Dostoevskii, *Polnoe sobranie sochinenii i pisem v 35 tomakh*, ed. V.E. Bagno et al. (St Petersburg: "Nauka," 2013), vol. 5, 479–532. The best study covering the philosophy and ideology of *Notes from the Underground* is still James Scanlan, *Dostoevsky the Thinker* (Ithaca, NY: Cornell University Press, 2002), 59–80.
- 2 The representation of consciousness is a key technique for realism and modernism. See Dorrit Cohn, *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction* (Princeton, NJ: Princeton University Press, 1978); Monika Fludernik, *The Fictions of Language and the Languages of Fiction. The Linguistic Representation of Speech and Consciousness* (London; New York: Routledge, 1993); *Towards a "Natural" Narratology* (London; New York: Routledge, 1996), 19–22.
- 3 G.A. Bialyi, "O psikhologicheskoi manere Turgeneva (Turgenev i Dostoevskii)," *Russkaia Literatura* 4 (1968): 34–50.
- 4 Gillian Beer, *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction*, 2nd ed. (Cambridge: Cambridge University Press, 2000), 156, 164.
- 5 Nicholas Dames, "1825–1880. The Network of Nerves," in *The Emergences of Mind: Representation of Consciousness in Narrative Discourse in English*, ed. David Herman (Lincoln: University of Nebraska Press, 2011), 227. For the intersection of physiology and fiction see also his book: Nicholas Dames, *The Physiology of the Novel: Reading, Neural Science and the Form of Victorian Fiction* (Oxford: Oxford University Press, 2007).
- 6 M. Holquist, "Bazarov and Secenov: The Role of Scientific Metaphor in Fathers and Sons," *Russian Literature* 6, no. 4 (1984): 359–74, 362, 367, 373. On the censorship office's meddling in the printed edition of *Reflexes of the Brain*, see the newest study of Sechenov's scholarly biography: G. Kichigina, *The Imperial Laboratory: Experimental Physiology and Clinical Medicine in Post-Crimean Russia* (New York: Rodopi, 2009), 240–1.
- 7 Valeria Sobol, *Febris Erotica: Lovesickness in the Russian Literary Imagination* (Seattle: University of Washington Press, 2011), 123–33.
- 8 R.G. Nazirov, "Sotsial'naia i eticheskaiia problematika proizvedenii F. M. Dostoevskogo 1859–1866 godov" (Kand. diss., Moscow, 1966), 397. The same thesis is repeated, albeit with some abbreviations, in his later monograph: R.G. Nazirov, *Tvorcheskie printsipy F.M. Dostoevskogo* (Saratov, 1982), 54.
- 9 See Harriet Murav, *Holy Foolishness: Dostoevsky's Novels and the Poetics of Cultural Critique* (Stanford, CA: Stanford University Press, 1992) and Scanlan, *Dostoevsky the Thinker*.

- 10 Murav, *Holy Foolishness*, 35–9. A very general description of Dostoevsky's attitude towards the science of his time is given in Diane Oenning Thompson, "Dostoevskii and Science," in *The Cambridge Companion to Dostoevskii*, ed. William J. Leatherbarrow (Cambridge: Cambridge University Press, 2002), 193–202. On Dostoevsky's notion of science, see also Melissa Frazier's chapter in this volume.
- 11 G. Kichigina, *The Imperial Laboratory*, 302.
- 12 I.M. Sechenov, "Refleksy golovnogo mozga," *Meditsinskii vestnik* 47 (1863): 461–84; 48, 493–512. English translation: I.M. Sechenov, *Reflexes of the Brain*, trans. S. Belskii (Cambridge, MA: MIT Press, 1965).
- 13 The English translation is cited in K.S. Koshtoyants, *Essays on the History of Physiology in Russia*, trans. D.P. Boder et al. (Washington, DC: American Institute of Biological Sciences, 1964), 170.
- 14 Kh.S. Koshtoyants, *Ocherki po istorii fiziologii v Rossii* (Moscow, 1946), 246–50.
- 15 Scanlan, *Dostoevsky the Thinker*, 68–73.
- 16 R.G. Nazirov, "Ob eticheskoi problematike povesti "Zapiski iz podpol'ia," in *Dostoevskii i ego vremia* (Leningrad, 1971), 145–6.
- 17 Sechenov, "Refleksy golovnogo mozga," *Meditsinskii vestnik* 48 (1863): 509–10; Translation: Sechenov, *Reflexes of the Brain*, 100–1.
- 18 Daniel Philip Todes, "From Radicalism to Scientific Convention. Biological Psychology from Sechenov to Pavlov" (PhD diss., University of Pennsylvania, 1981), 240–1.
- 19 Ibid., 259–61.
- 20 Sechenov, "Refleksy golovnogo mozga," 48 (1863): 509; Sechenov, *Reflexes of the Brain*, 100–1.
- 21 Ibid.
- 22 On this topic, see G. Kichigina, *The Imperial Laboratory*, 232–4.
- 23 This remark, and others like it, particularly those where the protagonist mentions mathematics, the unified calendar, logarithms, and science, were used by V.N. Belopol'skii to support a persuasive hypothesis, according to which Dostoevsky also engaged in a polemic against *The Course in Positive Philosophy* by Auguste Comte. See V.N. Belopol'skii, "S kem polemiziroval Dostoevskii v povesti 'Zapiski iz podpol'ia'?" in *Dostoevskii i filosofii. Sviazi i paralleli* (Rostov on Don, 1998), 20–30. This is not inconsistent with my thesis, since the Underground Man refers both to mathematics and to anatomy and physiology
- 24 Fyodor Dostoevsky, *Notes from Underground*, trans. Boris Jakim (Grand Rapids, MI and Cambridge, UK: William B. Eerdmans Publishing, 2009), 29 (my italics). From here on, all citations will give the *Polnoe sobranie sochinenii v 30 tomakh* reference first, followed by the page numbers for this translation.
- 25 By 1863, Dostoevsky's interest in the problem of the free will was already sparked by digests and reviews published by N.N. Strakhov in the *Svetoch*

- journal. A.S. Dolinin has discovered that “free wishing” is close to some ideas expressed in Strakhov’s review on the *Sketches of the Questions of Practical Philosophy* by P.L. Lavrov (*Svetoch* 7 [1860]: 1–13). Strakhov claims that “the true engine driving truly human activities always was and always will be ideas,” that human behaviour neither ought to be influenced by the environment nor is, in fact, influenced by it. “Substantively and necessarily, the will is subordinated only to one thing: the very idea of its freedom, and the idea of insubordination, autonomous and conscious self-determination.” Dostoevsky’s *Notes from Underground* would soon be constructed around this thought or idea of “insubordination” and “autonomous self-determination.” See A.S. Dolinin, “F. M. Dostoevskii i N. N. Strakhov,” in *Shestidesiatye gody* (Moscow: Izdatel'stvo Akademii nauk SSSR, 1940), 240.
- 26 Tsvetan Todorov, *Genres in Discourse* (Cambridge: Cambridge University Press, 1990), 82–6.
- 27 M.S. Gus, *Idei i obrazy Dostoevskogo* (Moscow: Gosudarstvennoe izdatel'stvo khudozhestvennoi literatury, 1971), 265–9; O.G. Dilaktorskaia, *Peterburgskaia povest' Dostoevskogo* (St Petersburg: Dmitrii Bulanin, 1999), 280–1. In the preface to his *History of Civilization in England* Buckle refuted Kant’s metaphysical concept of “free will” and postulated that it was the special internal social laws that determine people’s actions. These laws were discovered by Adolphe Quetelet. On Dostoevsky’s polemics with Quetelet and Buckle see Greta Matzner-Gore’s contribution to this volume.
- 28 V.N. Belopol'skii, *Dostoevskii i drugie: Stat'i o russkoi literature* (Rostov on Don: Foundation, 2011), 80.
- 29 The count is based on the book edition of 1866. I suspect that it occurs with less frequency in the newspaper edition of 1863.
- 30 Sechenov, “Refleksy golovno mozga,” 47 (1863): 483; Sechenov, *Reflexes of the Brain*, 58.
- 31 Sechenov, “Refleksy golovno mozga,” 48 (1863): 498; Sechenov, *Reflexes of the Brain*, 74.
- 32 Sechenov, “Refleksy golovno mozga,” 48 (1863): 499; Sechenov, *Reflexes of the Brain*, 76.
- 33 Sechenov, “Refleksy golovno mozga,” 48 (1863): 500; passage absent from Sechenov, *Reflexes of the Brain*.
- 34 Dostoevskii, *Polnoe sobranie sochinenii i pisem*, vol. 5, 522.
- 35 Sechenov, “Refleksy golovno mozga,” 47 (1863): 477; Sechenov, *Reflexes of the Brain*, 41.
- 36 Robert Louis Jackson, *The Art of Dostoevsky: Deliriums and Nocturnes* (Princeton, NJ: Princeton University Press, 1981), 175.
- 37 Jackson, *The Art of Dostoevsky*, 187.
- 38 On the idea of Christian self-abnegation, meant to appear explicitly in the character’s confession, but deleted by the censorship office, see

- N.F. Budanova, "Zapiski iz podpol'ia: zagadki tsenzurnoi istorii povesti," *Dostoevskii: Materialy i issledovaniia* 21 (2016), 236–45; Dostoevskii, PSS, vol. 5, 497–8.
- 39 Translated in: M.N. Shaternikov, "The Life of I. M. Sechenov," in *I.M. Sechenov. Biographical Sketch and Essays*, ed. Howard Gardner and Judith Kreiger Gardner (New York: Arno Press, 1973), xxii. Quoted in: Todes, *From Radicalism to Scientific Convention*, 264. Based on this deleted passage, Todes concludes that Sechenov, in his political views, was not a radical.
- 40 Fyodor Dostoyevsky, *The Double; The Gambler*, trans. Richard Pevear and Larissa Volokhonsky (London: Everyman's Library, 2005), 9. All translations of *The Double* are from this source, with occasional modifications by the translator of the present chapter.
- 41 It is no accident that in the 1870s Dostoevsky said that "Goliadkin is my chief underground type" (1:488). On the connection between *The Double* and *Notes from the Underground* also see the comments section in the newest full collection of works: Dostoevskii, *Polnoe sobranie sochinenii i pisem*, vol. 5, 484–5.
- 42 Jillian Porter, *Economies of Feeling: Russian Literature under Nicolas I* (Evanston, IL: Northwestern University Press, 2017), 50.
- 43 Lidiya Ginzburg, in analyzing ways of representing human psychology through biological determinism, found in the Russian novel, noted that "Dostoevsky's position stands out among his contemporaries in that he turned a metaphysical understanding of the freedom of the will into the constructive principle of his novels, the engine that drove his character's behaviour." See Lidiya Ginzburg, *O literaturnom geroe* (Leningrad: Sovetskii pisatel', 1979), 83. The newest studies, however, demonstrate that Dostoevsky had, in fact, absorbed quite a few positivist ideas, and used them while defending the necessity of faith in Christ. On this topic, see the remarkable article by Anna (Schur) Kaladiouk, "On 'Sticking to the Fact' and 'Understanding Nothing': Dostoevsky and the Scientific Method," *The Russian Review* 65, no. 3 (2006): 417–38.